

**REMARKS**

Claims 1-20 were pending. By this Amendment, claims 2-5, 8, 9, 12, 13, 15, 16, 18 and 19 have been canceled, without prejudice or disclaimer, and claims 1, 6, 7, 14, 17 and 20 have been amended to place the claims in better form for examination and clarify the claimed invention. Accordingly, claims 1, 6, 7, 10, 11, 14, 17 and 20 are now pending and presented for examination in the subject application, with claims 1, 6, 7, 14, 17 and 20 in independent form.

Applicant maintains that no new matter is introduced by this Amendment. Support for the claim amendments may be found in the application, for example, in claims 2, 4 and 5 as originally filed. Accordingly, Applicant respectfully requests that this Amendment be entered.

**Rejection Under 35 U.S.C. §103(a)**

On page 2 of the July 6, 2004 Office Action, claims 1-20 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 6,339,423 to Sampson et al. in view of U.S. Patent No. 6,032,260 to Sasmazel et al.

In reference to claims 1, 7 and 12-20, the Office Action states that Sampson discloses an access authentication system for providing a client with a service of connection to a terminal server. The Office Action further states that the system includes a first authentication server for determining whether or not the client should be connected to the first terminal server, on the basis of personal information input by the client to the first terminal server. The Office Action also states that the first authentication server creating first ticket data by encoding a client parameter, which includes part of the personal

information, on the basis of a predetermined formula. The Office Action further states that the access control 240 performs the function of the authentication server by determining if the browser is authenticated. The Office Action states that the access control also sends the browser a cookie that is encrypted therefore encoded personal information using a predetermined formula. The Office Action also states that Sampson creates a second cookie by encoding the client parameter on the basis of a predetermined formula when the browser tries to connect to a new domain.

The Office Action acknowledges that Sampson does not expressly disclose transferring the ticket to the web server, checking whether the ticket is used, and supplying the web server with information indicative of whether the second terminal server should be connected to the client.

The Office Action states that Sasmazel discloses a system of transferring the eticket from server to server. The Office Action further states that the eticket of Sasmazel is transferred to the second terminal server by the first sending it to the browser and then the browser send the ticket to the web server 220 or 240. The Office Action also states that the second authorization server (360), which performs the function of the second authentication server of detecting whether or not client parameter is valid and whether or not the first ticket data has been used. The Office Action further states that Sasmazel checks whether the user is in session, which is a method of checking whether the eticket has been used. The Office Action states that the web server is then supplied data indicative of whether or not the second terminal server should be connected to the client. The Office Action also states that Sasmazel stores in a file

information for authenticating the user and therefore first ticket data. The Office Action further states that comparing the first and second ticket data includes checking the validity of the ticket.

The Office Action alleges that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to transfer the ticket information to the web server, check whether the ticket is used and supply the web server with information indicative of whether the second terminal server should be connected to the client as in the system of Sasmazel in the system of Sampson. The Office Action further alleges that one of ordinary skill in the art would have been motivated to do this because the ticket may be securely passed from server to server without the user having to re-authenticate.

In reference to claims 2 and 8, more specifically, the limitation that wherein the predetermined formula is summarization using a one-way function, the Office Action acknowledges that Sampson does not expressly disclose a summarization formula.

The Office Action states that Sasmazel discloses that the predetermined formula is a summarization using a one-way function.

The Office Action alleges that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a secure hash function. The Office Action further alleges that one of ordinary skill in the art would have been motivated to do this because the ticket can be validated without communication between distributed servers.

In references to claim 3 and 9, more specifically, the limitation that wherein the access authentication system characterized in that the client parameter includes at least one of ID information of the client, an access-originator IP address and an expiration date set for the first ticket data, the Office Action acknowledges that Sampson does not expressly disclose the ID information of the client including an expiration date.

The Office Action states that the system of Sasmazel discloses the client parameter includes at least one of ID information of the client, an access-originator IP address and an expiration date set for the first ticket data.

The Office Action alleges that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include as ID information access IP address and an expiration date as in the system of Sasmazel in the system of Sampson. The Office Action further alleges that one of ordinary skill in the art would have been motivated to do this because the ticket may be securely passed from server to server without the user having to re-authenticate.

In reference to claim 4, more specifically, the limitation that wherein the first and second authentication servers include a predetermined common character string in the first and second ticket data, respectively, the Office Action refers to Sampson, column 4, lines 47-56 .

In reference to claim 5, the Office Action acknowledges that Sampson does not expressly disclose a system wherein the common character string is changed at a predetermined point in time.

The Office Action states that the system of Sasmazel suggests the common character string is changed at a predetermined point in time.

The Office Action alleges that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to update information on the ticket. The Office Action further alleges that one of ordinary skill in the art would have been motivated to do this because keeping updated information increases security by making sure that at the time the ticket is available the user is still authorized to access the resources specified.

The Office Action states that claim 6 is rejected on the same basis as the rejection for claim one. The Office Action further states that in addition, Sampson discloses a system wherein the user may enter logon information. The Office Action also states that logon information includes an ID and a password entered by the client. The Office Action further states that the ticket disclosed by Sasmazel that is transported from server to server includes an expiration date; and a common character string in the form of a public signature. The Office Action states that since the ticket includes ID information and the system checks whether as user is in session. The Office Action also states that the system of Sasmazel therefore compares the access-originator IP address provided in the ticket which is sent to the second terminal server this would result in determining whether or not access by the client has been executed on or before the expiration date.

In reference to claim 10, more specifically, the limitation that wherein the second authentication means judges validity of the

first ticket data, the Office Action acknowledges that Sampson does not expressly disclose the second authentication means judges validity of the first ticket data.

The Office Action states that Sasmazel stores in a file information for authenticating the user and therefore first ticket data. The Office Action further states that comparing the first and second ticket data includes checking the validity of the ticket. The Office Action also states that this suggests the second authentication means judges the validity of the first ticket data.

The Office Action alleges that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to judge the validity of the first ticket data as shown in Sasmazel in the system of Sampson. The Office Action further alleges that one of ordinary skill in the art would have been motivated to this because checking the validity of the ticket would expose any attempt to carry out fraud.

In reference to claim 11, more specifically, the limitation that wherein the second authentication means judges legality of the client parameter, the Office Action states that since the validity of the ticket is checked it follows that the legality of the client parameter is check.

Applicant maintains that Sampson and Sasmazel do not render obvious the claimed invention. The claimed invention is patentable over Sampson and Sasmazel for at least the following reasons.

The present application relates to access authentication when

service is provided to connect a client to a terminal server via another terminal server. The claimed invention of the present application provides for authentication by transferring client parameter and first ticket data created by the first authentication server to the second authentication server, and comparing the second ticket data created in the second authentication server with the first ticket data, thereby judging whether these two coincide with each other.

Since the first ticket data and the client parameter are sent via the internet or the like, a risk of interception and falsification exists. Applicant recognized this risk and devised a technique for making it impossible as a practical matter to have a third person fabricate the first ticket data and the client data. That is, even if the client data is falsified by a third person, there will be no harm if the first ticket data and the second data do not coincide with each other. In other words, there will be no harm if a formula of transforming the first ticket data from client parameter is prevented from being analyzed by the outsider.

According to the claimed invention, a one-way function is used when a first ticket data is created on the basis of a common character string that is changed at predetermined intervals and a client parameter. If a reverse calculation is performed based on the one-way function, to derive the client parameter and the common character string takes some time but is not impossible. However, if the common character string that the first authentication server and the second authentication server have in common is changed within a short time, even if a third person performed a reverse calculation based on the one-way function and the common character string is thus derived, the effectiveness

of the derived character string would probably have already expired.

On the other hand, since the first ticket data and the client parameter are input in the second authentication server, the second ticket data is created with ease by using the client parameter and the common character string, allowing authentication by comparing it with the first ticket data.

Sampson and Sasmazel do not disclose how to deal with unauthorized access by a third person, as provided by the claimed invention.

Therefore, even a combination of the teachings of Sampson and Sasmazel fails to teach or render obvious all features of the claimed invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection under 35 U.S.C. §103(a).

In view of the claim amendments and remarks hereinabove, Applicant maintains that the application is now in condition for allowance.

If a telephone interview would be of assistance in advancing prosecution of the subject application, Applicant's undersigned attorneys invite the Examiner to telephone them at the telephone number provided below.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition, and the Commissioner is authorized to charge the



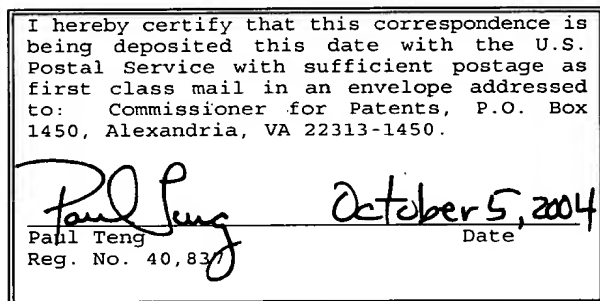
Masanori KUSUNOKI  
Serial No.: 09/805,284  
Filed: March 13, 2001  
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requisite fees to our Deposit Account No. 03-3125.

No fee is deemed necessary in connection with the filing of this Amendment. However, if any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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